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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/728,784	11/30/2000	Kevin Wiggen	PA1666US	2694

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EXAMINER

MAHMOUDI, HASSAN

ART UNIT	PAPER NUMBER
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2175

DATE MAILED: 06/05/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/728,784

Applicant(s)

WIGGEN ET AL

Examiner

Tony Mahmoudi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DOV POPOVIC

SUPERVISORY PATENT EXAMINER
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DETAILED ACTION

Claim Objections

1. Claims 16-17 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form, because it is a dependent claim dependent from itself. The examiner is making the assumption that this dependency is a typographical error, and for the purpose of examining this application, further assumes that claim 16 is dependent from claim 15. Appropriate correction is required in response to this office action.

Claim 17 is objected to as being of improper dependent form because it is dependent from the objected to dependent claim 16.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carpenter (U.S. patent No. 6,199,068) in view of Cabrera et al (U.S. patent No. 6,453,325.)

As to claim 1, Carpenter teaches a method of managing a data system (see Abstract) designed to ensure the integrity of data and a file system designed to manage files (see column 12, line 65 through column 13, line 11), comprising the steps of:

(a) ensuring data from an external sources is received by the data system (see column 6, line 64 through column 7, line 9); and

(b) ensuring the data is copied from the data system to the file system (see column 13, lines 58-65.)

Carpenter does not teach interpreting metadata to ensure data integrity is maintained during the copying of data from the data system to the file system.

Cabrera et al teaches backup and restoration of database systems (see Abstract), in which he teaches interpreting metadata (see column 9, lines 11-18, where “interpreting metadata” is read on “metadata definition component”) to ensure data integrity is maintained during the copying of data from the data system to the file system (see column 17, lines 38-49.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified have modified Carpenter to include interpreting metadata to ensure data integrity is maintained during the copying of data from the data system to the file system.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Carpenter with the teaching of Cabrera et al, because interpreting metadata to ensure data integrity is maintained during the copying of data from the data system to the file system would increase the stability and reliability of the file system.

As to claim 2, Carpenter as modified teaches wherein the data system that is designed to ensure the integrity of the data is a relational database following ACID protocols (see Carpenter, column 12, lines 43-64.)

As to claim 3, Carpenter as modified teaches wherein the metadata is stored in the relational database (see Cabrera et al, column 9, lines 11-13.)

As to claim 4, Carpenter as modified teaches wherein the step of receiving the data is performed through a communications device from an external source (see Carpenter, column 6, line 64 through column 7, line 9, and see figure 2D.)

As to claim 5, Carpenter as modified teaches the method further comprising the step of:
(d) directing a request to retrieve the data (see Carpenter, column 23, lines 42-49) to:
the data system when the request is made prior to when the metadata indicates that the step of copying the data to the file system has been completed; or

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the file system after the metadata indicates that the step of copying the data to the file system has been completed (see Cabrera et al, column 22, lines 49-65.)

As to claim 6, Carpenter as modified teaches the method further comprising the steps of:

(e) ensuring the data is backed up (see Cabrera et al, column 23, lines 10-21, where “BackupVerify” is taught); and

(b) ensuring the data on the data system is deleted after the metadata indicates that the step of copying the data to the file system has been completed (see Cabrera et al, column 9, lines 11-25.)

As to claim 7, Carpenter as modified teaches the method further comprising the step of using the metadata to determine whether a request to retrieve the data should be directed to the file system (see Cabrera et al, column 27, line 59 through column 28, line 5.)

As to claim 8, Carpenter as modified teaches wherein the metadata includes information concerning location of a most recent version of the data and the step of using the metadata (see Cabrera et al, column 28, lines 15-18.)

As to claim 9, Carpenter as modified teaches the method further comprising the step of using the information concerning location to determine where a request to retrieve the data should be directed (see Cabrera et al, column 19, lines 7-16.)

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As to claim 10, Carpenter as modified teaches wherein the integrity of the data is ensured during copy, transfer, delete, wipe, rename, and backup operations through use of the metadata (see Cabrera et al, column 6, lines 27-43.)

As to claim 11, Carpenter as modified teaches wherein the integrity of the data is ensured during copy, transfer, delete, wipe, rename, and backup operations through use of the metadata (see Cabrera et al, column 6, lines 27-43) by using minimum ACID protocols (see Carpenter, column 12, lines 43-46.)

As to claim 12, Carpenter as modified teaches the method further comprising the step of applying a filter to the data during the step copying the data from the data system to a file system (see Carpenter, column 25, lines 29-36.)

As to claim 13, Carpenter as modified teaches wherein the filter is either an anti-virus filter, an access control filter or a security filter, or some combination thereof (see Carpenter, column 25, lines 29-36, where "ScheduleView" handles database access, and wherein schedules are retrieved and filtered by ScheduleView.)

As to claim 14, Carpenter teaches a method for storing data (see column 1, lines 14-19), comprising the steps of:

(a) initially receiving the data into a data system that is designed to ensure the integrity of the data (see column 6, line 64 through column 7, line 9); and

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(b) copying the data from the data system to a file system, designed to manage files, using protocols that ensure the integrity of data during the copying (see column 13, lines 58-65.)

Carpenter does not teach creating metadata that can be used to ensure the integrity of the data and describe and track the state and location of the data.

Cabrera et al teaches backup and restoration of database systems (see Abstract), in which he teaches creating metadata that can be used to ensure the integrity of the data (see column 26, lines 15-18) and describe and track the state and location of the data (see column 27, line 59 through column 28, line 5.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified have modified Carpenter to include creating metadata that can be used to ensure the integrity of the data and describe and track the state and location of the data.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Carpenter with the teaching of Cabrera et al, because creating metadata that can be used to ensure the integrity of the data and describe and track the state and location of the data would increase the stability and reliability of the file system.

As to claim 15, Carpenter teaches a method of transferring data between a first system and a second system (see column 37, lines 9-16) while ensuring the integrity of the data (see column 41, lines 11-12.)

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(a) determine when the data transfer is in progress (see column 28, line 65 through column 29, line 3);

(b) determine when the data transfer has been successfully completed (see column 22, lines 41-45); and

(c) indicate when rollback procedures can be initiated from a backup (see column 12, lines 43-50.)

Carpenter does not teach using metadata.

Cabrera et al teaches backup and restoration of database systems (see Abstract), in which he teaches using metadata (see column 13, lines 48-53, and see column 24, lines 20-30.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified have modified Carpenter to include using metadata.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Carpenter with the teaching of Cabrera et al, because using metadata would provide definitions and guidelines as to the status of the data being transferred between systems.

As to claim 16, Carpenter as modified teaches further comprising the step of directing a request to access the data to the second system (see Cabrera et al, column 4, lines 58-63) when the metadata indicates that a data transfer has been successfully completed (see Carpenter, column 22, lines 41-45.)

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As to claim 17, Carpenter as modified teaches the method further comprising the step of directing a request to access the data to the first system (see Cabrera et al, column 4, lines 58-63) when the metadata does not indicate that a data transfer has been successfully completed (see Cabrera et al, column 22, lines 49-65.)

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of art with respect to methods and systems of transferring data between systems and data integrity in such transfers, in general:

Patent No.	Issued to	Cited for teaching
US 5,835,764	Platt et al.	Schedules in Transaction Processing Systems.
US 6,061,708	McKeehan et al.	Ensuring Data Integrity in Transaction Processing Systems.
US 6,067,542	Carino, Jr.	Query Optimizer in Distributed Systems.
US 6,304,882	Strellis et al.	Data Replication Processing System.


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5. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

tm

May 27, 2003


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